

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

- 1 1. (Currently Amended) A method for performing adaptive migration and execution, the  
2 method comprising:  
3       obtaining a plan generated by a planner executable in a computer;  
4       adapting the plan to satisfy migration constraints; [[and]]  
5       starting executing at least one move of a data chunk in the plan;  
6       feeding back information relating to the execution of the at least one move to the planner;  
7       and  
8       modifying the plan by the planner in response to the information.
- 1 2. (Original) The method of claim 1, wherein the steps in the method are repeated until no  
2 moves are pending.
- 1 3. (Original) The method of claim 2, further comprising:  
2       waiting for all in-progress executions of moves to complete after no moves are pending.
- 1 4. (Original) The method of claim 1, further comprising:  
2       waiting for a move to complete if the adaptation of the plan indicates no moves meet the  
3 migration constraints.
- 1 5. (Currently Amended) The method of claim 1, further comprising:  
2       estimating load value information; and  
3       using the load value information to assist in ~~determining a modified~~ modifying the plan.
- 1 6. (Currently Amended) The method of claim 1, wherein adapting the plan comprises:  
2       selecting at least one step from the following: pruning at least one move that ~~violate~~  
3 violates a migration constraint; selecting a largest set of moves that do not violate a migration  
4 constraint; and skipping a move that violates a migration constraint.

1    7. (Original) The method of claim 1, further comprising:  
2                 treating a data chunk as existing in an old location and new location while a move is in  
3                 progress.

1    8. (Currently Amended) The method of claim 7, ~~wherein the step of treating the data chunk~~  
2 ~~comprises 1, further comprising:~~  
3                 pruning moves that violate an access rule when a move is in progress, ~~wherein the pruned~~  
4 ~~moves are not selected for inclusion in the plan.~~

1    9. (Original) The method of claim 7, wherein the step of treating the data chunk comprises:  
2                 considering the data chunk as decreasing a per-node free space information at both the  
3                 old location and the new location when a move is in progress.

1    10. (Currently Amended) A method for performing adaptive migration and execution, the  
2                 method comprising:  
3                 obtaining a plan created by a planner executable in a computer;  
4                 determining all valid moves in the plan;  
5                 starting executing a valid move; [[and]]  
6                 feeding back information relating to execution of the valid move to the planner; and  
7                 if at least one additional move is moves are required, obtaining a modified modifying the  
8                 plan after starting the valid move by the planner based on the information.

1    11. (Currently Amended) The method of claim 10, further comprising:  
2                 determining if an executor is available, wherein executing the valid move is performed by  
3 the available executor.

1    12. (Original) The method of claim 10, wherein the steps in the method are repeated until no  
2                 moves are pending.

1    13. (Original) The method of claim 12, further comprising:  
2                    waiting for all in-progress execution of moves to complete after no moves are pending.

1    14. (Currently Amended) An article of manufacture, comprising:  
2                    a machine-readable medium having stored thereon instructions to:  
3                    obtain a plan;  
4                    adapt the plan to satisfy migration constraints; [[and]]  
5                    [[start]] execute at least one move of a data chunk in the plan;  
6                    modifying the plan based on feedback configuration information regarding in-progress  
7                    execution of the at least one move; and  
8                    execute another move in the modified plan.

1    15. (Currently Amended) An apparatus for adaptive migration, the apparatus comprising:  
2                    a planner configured to generate a migration plan based upon configuration information;  
3                    an adapter configured to receive the plan from the planner, to receive migration  
4                    constraints information, target configuration information and current configuration information,  
5                    and to transmit the configuration information to the planner; and  
6                    at least one executor configured to execute a move in the plan, wherein the configuration  
7                    information relates to execution of the move.

1    16. Cancelled)

1    17. (Currently Amended) The apparatus of 15, wherein the configuration information further  
2                    includes load information.

1    18. (Original) The apparatus of 15, further comprising:  
2                    a load estimator configured to estimate load information for use in determination of the  
3                    plan.

1 19. (Currently Amended) The apparatus of 18, wherein the configuration information  
2 includes the estimated load information.

1 20. (Currently Amended) The apparatus of claim 15, wherein the adapter iteratively obtains  
2 plans from the planner a plan until no moves are pending.

1 21. (Original) The apparatus of claim 20, wherein the adapter waits for all in-progress  
2 executions of moves to complete after no moves are pending.

1 22. (Currently Amended) The apparatus of claim 15, wherein the adapter waits for a move to  
2 complete if the adaptation of the plan indicates adapter determines that no moves meet the  
3 migration constraints.

1 23. (Cancelled)

1 24. (Original) The apparatus of claim 15, wherein the adapter is configured to select at least  
2 one step from the following: prune at least one move that violate a migration constraint; select a  
3 largest set of moves that do not violate a migration constraint; and skip a move that violates a  
4 migration constraint.

1 25. (Original) The apparatus of claim 15, wherein the adapter is configured to treat a data  
2 chunk as existing in an old location and new location while a move is in progress.

1 26. (Original) The apparatus of claim 25, wherein the data chunk is treated by pruning  
2 moves that violate an access rule when a move is in progress.

1 27. (Original) The apparatus of claim 25, wherein the data chunk is treated by considering  
2 the data chunk as decreasing a per-node free space information at both the old location and the  
3 new location when a move is in progress.

1 28. (Cancelled)

1 29. (New) The method of claim 1, further comprising:  
2 executing at least a second move of a data chunk in the modified plan;  
3 feeding back information relating to the execution of the at least second move to the  
4 planner; and  
5 further modifying the plan by the planner in response to the information relating to the  
6 execution of the at least second move.

1 30. (New) The method of claim 1, wherein execution of the at least one move is performed  
2 by an executor, the method further comprising:  
3 waiting for the executor to complete the at least one move; and  
4 determining whether another move is to be executed;  
5 wherein modifying the plan is performed in response to determining that the another  
6 move is to be executed.

1 31. (New) The method of claim 1, further comprising:  
2 tracking the information relating to the execution of the at least one move by an adapter  
3 that also adapts the plan to satisfy migration constraints,  
4 wherein feeding back the information is performed by the adapter to the planner.

1 32. (New) The article of claim 14, wherein the machine-readable medium further contains  
2 instructions to:  
3 wait for an executor to complete execution of the at least one move; and  
4 determine whether another move is to be executed;  
5 wherein modifying the plan is in response to determining that another move is to be  
6 executed.

1    33. (New) The article of claim 14, wherein the machine-readable medium further contains  
2    instructions to:

3                estimate load information associated with the plan;

4                wherein modifying the plan is further based on the estimated load information.

1    34. (New) The apparatus of claim 15, wherein the adapter is configured to further track the  
2    configuration information relating to the execution of the move and execution of other moves,  
3                and wherein the planner is configured to iteratively modify the migration plan as the  
4    tracked configuration information is repetitively fed back to the planner.